

BEES COLLECTED AT BOREGO, CALIFORNIA, BY
WILMATTE P. COCKERELL AND MILENE PORTER

BY T. D. A. COCKERELL

The following bees were collected at Borego, San Diego County, California, April 3, 1932.

Spinoliella puellæ Cockerell, n. sp.

Female (Type). Length about 9.5 mm.; black, the head and thorax with abundant long greyish white hair; head broad, wholly without light markings, clypeus and sides of vertex highly polished; eyes intense black; lower part of clypeus with scattered strong punctures; flagellum short and stout, ferruginous beneath except at base; a highly polished semicircular area in front of and surrounding middle ocellus, interrupted in middle anteriorly by a narrow sulcus; mesothorax polished, anteriorly with scattered delicate punctures; scutellum polished, with a shallow median sulcus; tegulæ brown; wings hyaline, a little dusky, stigma very dark reddish; basal nervure falling far short of nervulus; first recurrent nervure joining second cubital cell very near its base, second far from its apex; legs without light markings, tuft on hind knees pale reddish; first four tergites with entire canary-yellow bands, more or less narrowed in middle and broadly, shallowly emarginate posteriorly at sides; fifth tergite with a pair of transverse yellow marks, rounded in front, straight behind; apex with pale reddish brown hair; venter with transverse pallid depressions at the median bases of the sternites.

Male similar but narrower; clypeus all black, or with an inconspicuous median pale yellow line; lateral marks extending as a line along orbits up to level of antennæ, but at lower end broadened, with a hook-like extension; flagellum short, very obscurely reddish beneath; fifth tergite, in addition to the two transverse marks, having a little spot at each extreme side, or the fifth may have an entire band, extending to sides, or the lateral spots may be wanting.

The females had collected the very pale pollen from a species of evening primrose (Onagraceæ)¹. The species is easily known among those with black face in female, by the entire bright yellow abdominal bands and rather large size. The labial palpi are of moderate length but much longer than in *S. comptula* Ckll. In *S. euxantha* Ckll. the labial palpi have the first joint enormously elongated, longer than the head, while the other three are very minute. *S. euxantha* (from Claremont, California) must

¹ Mr. Timberlake informs me that he also has taken *S. puellæ*. Those he found were on flowers of *Malacothrix californica*.

stand as the type of a new subgenus or genus *Claremontiella*.²

The name *S. puellæ* commemorates the very little girl who helped my wife to collect the specimens.

Hesperapis wilmattæ Cockerell, n. sp.

Female: Length nearly 8 mm., anterior wing slightly over 6; black, the sides of face, front, occiput and cheeks with long white hair; long white hair also on pleura and sides of metathorax, but mesothorax, which is minutely punctured and hardly shining, pruinose with excessively short thin hair, giving it a dusty appearance; the scutellum is similar, but with some longer hair; facial quadrangle about as broad as long, orbits somewhat converging below; clypeus convex, smooth and highly polished; supraclypeal area polished; flagellum short and thick, red beneath except at base; sides of front shining, but finely and closely punctured; area of metathorax large, entirely dull; apical truncation shining, with a very large and deep central pit; tegulæ small, testaceous; wings hyaline; stigma large, lanceolate, clear ferruginous, nervures fuscous; second cubital cell very long, receiving first recurrent nervure some distance from base, and second still more remote from apex; legs black, with middle and hind knees red; apical margin of hind tibiæ red; mid tibiæ densely covered on outer side with white hair, on inner side bare and polished; abdomen dull, extremely densely and minutely punctured, basal declivity of first tergite polished; second and following tergites with a thin very short covering of somewhat reddish hair; tergites 1 to 5 with broad dense white hair-bands; apical plate reddish, narrowing to a truncate, feebly emarginate, end; maxillary palpi six jointed, the last three of equal length, and only a little shorter than those before.

One specimen. Related to *H. fuchsi* (Vier.) in several respects, but smaller. The abdomen resembles that of *H. pellucida* Ckll. which, however, has a polished mesothorax. The thoracic pubescence recalls that of *H. elegantula* Ckll.

Osmia liogastra Cockerell, n. sp.

♀ Length hardly 7 mm., anterior wing hardly 5; robust with broad head, rather small thorax, and very broad and short abdomen; thorax and abdomen shining olive green, head darker and duller (very densely punctured), the lower part of the clypeus black; tegulæ very dark brown, not at all metallic; legs entirely black; ventral scopa black; pubescence white, very faintly yellowish on tubercles and thoracic dorsum; scattered long inconspicuous black hairs on the thorax above. Mandibles black, tridentate; clypeus simple, densely punctured, the apical margin shining, with the lateral angles prominent; hair at sides of face pure white, but

² For reasons given in Proc. Calif. Acad. Sci., XII (1923), p. 101, I do not think the name *Nomadopsis* Ashmead is available.

that on clypeus yellowish, contrasting; front with a median groove; flagellum short, dark red beneath except basally; third antennal joint nearly twice as long as fourth; area of metathorax moderately shining, at base with very fine plicæ and beyond with a microscopical cancellate sculpture; basal nervure meeting nervulus; first recurrent nervure as distant from base of second cubital cell as length of first intercubitus, but second recurrent scarcely half as far from end of cell; hair on inner side of hind basitarsi dark brown; abdomen shining, very finely punctured, with white hair at sides, on tergites 3 to 5 forming very thin imperfect bands.

One specimen. It is evidently polytropic as it has gathered three kinds of yellow pollen, two of Compositæ and the third (most abundant) I fail to recognize.

In the tables of Pacific Coast and Canadian *Osmia* by Miss Sandhouse and in my table of Rocky Mountain species, this runs persistently to *O. phaceliæ* Ckll. It is, however, much smaller and quite differently colored. I had to consider whether it could be the unknown female of *O. nemoris* Sandhouse, but the lack of metallic color on the tegulæ, and other characters, seem to make this improbable. The position of the recurrent nervures differs conspicuously from that of *O. nemoris*.

Megachile xerophila Cockerell, n. sp.

Female: Length about 10 mm., anterior wing a little over 6; black, robust, with large head and heart-shaped abdomen; pubescence rather abundant, erect, clear white, not mixed with black, but black on last two sternites or (on the second specimen) last sternite and apical part of penultimate one; mandibles with two large apical teeth, and a long oblique cutting edge, leading to the obtuse inner corner; clypeus prominent, the upper part convex, the lower middle flattened; the upper part very densely punctured and dull, the lower more shining, with the larger punctures more irregularly placed; lower margin simple; some red hairs from under side of mandibles; vertex dull and finely punctured; antennæ entirely black; third joint above one-fourth longer than fourth; mesothorax entirely dull, the sculpture consisting of a microscopical reticulation, on which are scattered shallow punctures, distant from each other about two punctures width; scutellum dull with indications of a shining median line; tegulæ very small, black with white hair in front; wings clear, very faintly dusky apically, nervures black; basal nervure falling considerably short of nervulus; second cubital cell receiving recurrent nervures close to, and about equally distant from, base and apex; legs black, with white hair on outer side, dark brown on inner side of front and hind basitarsi, but clear red on middle pair seen from in front;

spurs pale reddish; hind basitarsi rather broad, longer than the remaining joints together; abdomen shining, with five very distinct clear white hair-bands; sixth tergite straight in lateral profile, covered with a fine white pruinose pubescence; white hair of scopa very clear and bright.

Two specimens. Mitchell, in his recent table of neotropical *Megachile*, has used some characters not hitherto cited, so I thought it worth while to run our species through it. It comes out quite definitely at *M. affabilis* Mitch., differing by the lack of black hair on pleura. *M. affabilis* from Paraguay is really a quite different species. In my table of Lower California species (1924), *M. xerophila* runs straight to *M. vanduzeei* Ckll., and is quite without spots or bands of pubescence on the thorax above. *M. vanduzeei* has a similar aspect but is much larger, with a band of white pubescence in front of scutellum and quite different mandibles. The mandibles and sixth tergite exclude our species from a number of superficially similar small forms. One of the specimens was taken at evening primrose but had not collected pollen.

A NOTE ON *ANDRENA NUDIMEDIOCORNIS* VIER.

Andrena pallidiscopa trifasciata

Timberlake and Cockerell, n. subsp.

Andrena nudimediocornis Viereck, Cockerell, Pan-Pacific Entomologist, VIII (1932) p. 176.

The species described as *A. nudimediocornis*, from Gavilan, California, was considered by both of us to represent a new species, *A. trifasciata*. After the description was sent for publication, Timberlake borrowed paratype material of *A. nudimediocornis* Viereck, a species very briefly indicated, but not really described by Viereck in the Canadian Entomologist XXXVI (1904) p. 227. Viereck's material was taken at Corvallis, Oregon in May and June, by Cordley. It appeared upon comparison, that in spite of some differences, this *A. nudimediocornis* was the same species as *A. trifasciata*, and accordingly Viereck's designation was substituted in proof.

We have now both examined the paratype of *A. nudimediocornis* in comparison with *A. trifasciata*, and conclude that the